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EXAMINER

MUNSON, G

ART UNIT

PAPER NUMBER

2811

DATE MAILED:

09/19/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

318,159

Applicant(s)

H. RHODES

Examiner

G. MUNSON

Group Art Unit

2811

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 13 June 2000
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 45, 46, 49-52, 54-57, 59-76 is/are pending in the application.
- Of the above claim(s) 61-67 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 45, 46, 49-52, 54-57, 59, 60, 68-76 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

Art Unit: 2811

Claims 61-67 are withdrawn from consideration as being for non-elected species, the election having been made *without* traverse in the response, paper No. 5, filed 8 November 1999.

Applicants are required to cancel the non-elected claims as part of a complete response to this office action. Note that cancellation of the non-elected claims would not preclude the later filing of a divisional application on the non-elected invention (35 U.S.C. 120, 121).

Claims 72 and 76 are rejected under 35 U.S.C. 112, first paragraph. The specification (Figure 8, pages 9-10) describes the "first" and "second" dielectric materials 24 and 34 as being the same, specifically, silicon dioxide. The specification does not specify another dielectric. These claims would be new matter.

The process terminology (claims 68, 73) is considered only in terms of a necessary *resultant structure* from the process. The process itself is not at issue. The device claims are *not* limited to the recited process. See MPEP 2113; *In re Brown*, 173 USPQ 685 (CCPA 1972); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980); *In re Marosi*, 218 USPQ 289, 292-293 (CCPA 1983); *In re Thorpe*, 227 USPQ 964 (CAFC 1985).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2811

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45, 46, 49-52, 54-57, 59, 60, 68-70, 72-74 and 76 are rejected under 35 U.S.C. 103 as unpatentable over Schuegraf et al and Jeng et al '853 considered together. Impurity dopants in substrate are conventional, as applicant would agree and as shown by Jeng et al (column 3, line 61, P- substrate) which would have been obvious to use for substrate 10 of Schuegraf et al (Figure 3D). The claims remain broad in scope. The "first" dielectric material reads on dielectric film 24; the "second" dielectric material reads on dielectric material 26. The "ions" read on subportions of a doped substrate 10 under trench dielectric 24. The claimed "ions" do not distinguish over other "ions" in a doped substrate 10.

Claims 45, 46, 49-52, 54-57, 59, 60, 68-71 and 73-75 are rejected under 35 U.S.C. 102 as unpatentable as shown by Jeng '164 or Narita. See Figure 12 of Jeng; Figure 1 of Narita. For Jeng, the "first" and "second" dielectric materials read on subportions of dielectric layer 7; the "ions" read on subportions of P type substrate 1 under dielectric layer 7. For Narita, the "first" and "second" dielectric materials read on subportions of field oxide 14. The claims remain broad in scope.

Art Unit: 2811

Claims 46, 49-52, 54, 55, 57, 59, 60, 68-71 and 73-75 are rejected under 35 U.S.C. 102 as unpatentable as shown by Kohara et al. See Figure 2C. The “first” and “second” dielectric materials read on subportions of oxide layer 2; the “ion implanted” region reads on region 3 plus subportions of region 1 adjacent region 3 (claims 51, 52, 59, 60).

Claims 45, 49-52 and 68-71 are rejected under 35 U.S.C. 102 as unpatentable as shown by Kooi et al. See Figures 8, 10; column 7, line 1, to column 8, line 3. The “first” and “second” dielectric materials read on subportions of oxide 5 or oxide 29; the “ion implanted” region reads on zone 6 or zone 28.

Claim 45, 49-52 and 68-71 are rejected under 35 U.S.C. 102 as unpatentable as shown by Doo. See Figures 5, 6. The “first” and “second” dielectric materials read on subportions of oxide 6; the “ion implanted” region comprises region 9.

Claims 49-52 and 68-71 are rejected under 35 U.S.C. 102 as unpatentable as shown by Mastroianni et al. See Figure 3J. The “first” and “second” dielectric materials read on subportions of isolation region 125; the “ion implanted” region reads on a subportion of channel stop region 102 (claim 51, 52).

Claims 45, 49-52 and 68-71 are rejected under 35 U.S.C. 102 as unpatentable as shown by Custode et al. See Figures 1, 13. The “first” and “second” dielectric materials read on subportions of field oxide 34; the “ion implanted” region comprises region 13, 49.

Art Unit: 2811

Claims 46, 49-52, 54, 55, 57, 59, 60, 68-71 and 73-75 are rejected under 35 U.S.C. 102 as unpatentable shown by Joo et al. See Figure 15. The "first" and "second" dielectric materials read on subportions of field oxide layer 65; the "ion implanted" region comprises layer 68.

The references are of record.

The arguments in the response, filed 13 June 2000, have been considered but are not persuasive, as noted above. The references do show the "first" and "second" dielectric materials and the "ion implanted" region, insofar as broadly claimed. The "first" and "second" areas of a dielectric region, as claimed, do not distinguish over subportions of a dielectric region shown in the references. The references as well as this invention show a dielectric in a trench used for isolation.

No claim is allowed.

This action is **FINAL**.

This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee of appropriate amount.

If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal

Art Unit: 2811

requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

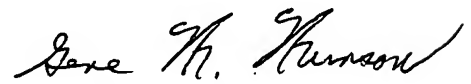
A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing, whichever is longer, of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply to the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication should be directed to G. Munson at telephone number (703) 308-4925 or 308-0956.

Munson/nt
09/14/00


GENE M. MUNSON
EXAMINER
GROUP ART UNIT 2811